

Patent Abstracts of Japan

PUBLICATION NUMBER : 60023973  
PUBLICATION DATE : 06-02-85

APPLICATION DATE : 15-07-83  
APPLICATION NUMBER : 58130102

APPLICANT : HITACHI MAXELL LTD;

INVENTOR : MANABE TOSHIKATSU;

INT.CL. : H01M 6/16 H01M 10/40

TITLE : ORGANIC ELECTROLYTE BATTERY

ABSTRACT : PURPOSE: To provide an organic electrolyte battery having excellent heavy-load characteristic, low-temperature characteristic and preservation stability by using a phosphoric triester as an electrolyte solvent.

CONSTITUTION: Either a phosphoric triester alone or mixture of two or more phosphoric triesters can be used as an electrolyte solvent in an organic electrolyte battery. Compounds such as  $(\text{CH}_3\text{O})_3\text{P}=\text{O}$ ,  $(\text{C}_2\text{H}_5\text{O})_3\text{P}=\text{O}$ ,  $(\text{C}_3\text{H}_7\text{O})_3\text{P}=\text{O}$ ,  $(\text{C}_4\text{H}_9\text{O})_3\text{P}=\text{O}$ ,  $(\text{C}_8\text{H}_{17}\text{O})_3\text{P}=\text{O}$ ,  $(\text{ClCH}_2\text{CH}_2\text{O})_3\text{P}=\text{O}$ ,  $(\text{Cl}_2\text{C}_3\text{H}_5\text{O})_3\text{P}=\text{O}$ ,  $(\text{C}_6\text{H}_5\text{O})_3\text{P}=\text{O}$  and  $(\text{CH}_3\text{C}_6\text{H}_4\text{O})_3\text{P}=\text{O}$  are listed as phosphoric triesters. By using such phosphoric triesters as electrolyte solvents, decomposition of a super-acid-system electrolyte such as  $\text{LiPF}_6$ ,  $\text{LiBF}_4$ ,  $\text{LiAsF}_6$  or  $\text{LiSbF}_6$  is suppressed increasing the stability of electrolyte thereby improving the storage stability of the battery. In such a battery, the characteristics of the super-acid-system electrolyte such as a high solubility in the solvent, a high conductivity and a higher stability than that of a perchlorate system compound can effectively be exhibited.

COPYRIGHT: (C) JPO